Theta Pro2Serve Management Company, LLC

Environmental Management & Enrichment Facilities

Scoping Plan for the Return of the Portsmouth Gaseous Diffusion Plant to the United States Department of Energy

Managed by
Theta Pro2Serve Management Company, LLC
for the Portsmouth/Paducah Project Office
of the United States Department of Energy

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Scoping Plan for the Return of the Portsmouth Gaseous Diffusion Plant to the U.S. Department of Energy

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THETA PRO2SERVE MANAGEMENT COMPANY, LLC
managing the
Infrastructure Activities at the
Portsmouth Gaseous Diffusion Plant
under contract DE-AC24-05OH20193
for the
U.S. DEPARTMENT OF ENERGY

CONTENTS

ACRONYMS

ASM	always-safe mass
BJC	Bechtel Jacobs Company LLC
CD	Critical Decision
CMS	Corrective Measures Study
CSB	Cold Standby
CSD	Cold Shutdown
D&D	Decontamination and Decommissioning
DFF&O	Director's Final Findings and Orders
DOE	U.S. Department of Energy
DSA	Documented Safety Analysis
EM	Environmental Management
EPA	Environmental Protection Agency
ERO	electricity reliability organizations
ES&H	Environmental Safety and Health
FFCA	Federal Facilities Compliance Agreement
FIMS	Facility Information Management System
GDP	Gaseous Diffusion Plant
GIS	Geographic Information System
HA	Hazard Analysis
HEU	Highly Enriched Uranium
LPP	LATA/Parallax Portsmouth LLC
M&I	Management and Integration
NDA	non-destructive assay
NRC	Nuclear Regulatory Commission
Ohio EPA	Ohio Environmental Protection Agency
OSDF	On-Site Disposal Facility
OVEC	Ohio Valley Electric Corporation
PCB	polychlorinated biphenyl
PGDP	Paducah Gaseous Diffusion Plant
PHS	Preliminary Hazard Screenings
PORTS	Portsmouth Gaseous Diffusion Plant
PPPO	Portsmouth/Paducah Project Office
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RFP	Request for Proposal
S&M	surveillance and maintenance
SAR	Safety Analysis Report
SARA	Superfund Amendments Reauthorization Act
SER	Safety Evaluation Report
SPCC	Spill Prevention Control and Countermeasures
SWMUs	Solid Waste Management Units
TPMC	Theta Pro2Serve Management Company LLC
TSR	Technical Safety Requirements
U.S. EPA	United States Environmental Protection Agency
UDS	Uranium Disposition Services LLC
USEC	United States Enrichment Corporation
USQD	Unreviewed Safety Question Determination
UST	Underground Storage Tank

1. PURPOSE

The purpose of this scoping plan is to document the necessary actions required to accomplish a timely and effective transfer of the Portsmouth Gaseous Diffusion Plant (PORTS) back to the U.S. Department of Energy (DOE). This plan discusses and recommends actions that United States Enrichment Corporation (USEC), DOE, and other DOE prime contractors should take before completion of facility transfers. The statements outlined within this plan will be based on the premise that PORTS will enter a prompt Decontamination and Decommissioning (D&D) following the completion of DOE ongoing programs. Accomplishment of the defined actions should be performed within the next 18 to 24 months to avoid increased costs to DOE that would result from extended surveillance and maintenance (S&M) activities. S&M activities are required during the defined period as well as during the planned D&D program. However, an extended S&M operation, without a parallel D&D program, yields no beneficial value for reduced facility maintenance or DOE's goals to demonstrate significant facility footprint reductions over the next 5 to 10 years as defined in DOE O. 430.1B, *Real Property and Asset Management.*

This plan utilizes previous studies, existing analyses and evaluations, and existing conditions to identify critical actions that, if not performed, could result in unnecessary delay and expense. Actions will be defined relating to lease requirements, regulatory framework, workforce planning, and infrastructure and utility modifications that would prepare PORTS for the future D&D mission.

In some areas, decision points are identified or clarification is recommended where determinations need to be made on the desired path forward. Also, included are: identified permits, regulatory agreements, and administrative orders that will require modification based on new missions at PORTS. In these instances, scope is not defined, but rather discussion on the need to reach decisions for the path forward and sensitivities relating to regulatory issues. Timely decisions will allow for maximum benefit of cost reductions, where possible, and will assist in assurance that the schedule for transfer is not delayed.

Following issuance of this scoping plan, DOE should enter into a planning process as outlined in DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets*. Each action approved for implementation should have detailed estimates developed, be logically sequenced in a formal scheduling software, have responsibility definitions outlined and earned value matrix determined. This process has been defined in the Theta Pro2Serve Management Company LLC (TPMC) Pre-D&D Program Management Plan (TPMC PORTS-16). Field execution of a defined task should have formal work planning packages developed. A work package outline is in the Appendix of this plan. Full utilization of this process allows DOE and contractor management to initiate a formal process to validate activity progress, and identify issues early for development of recovery plans; thereby ensuring successful accomplishment of planned work.

1.1 HISTORY/OVERVIEW

The Portsmouth and Paducah Gaseous Diffusion Plants (GDPs) are owned by DOE, and the enrichment production facilities at these sites are leased to USEC. The terms and conditions of this arrangement are contained in the "*Lease Agreement between the United States Department of Energy and the United States Enrichment Corporation*," dated July 1, 1993. The lease agreement affirms USEC's right to operate and maintain the two GDPs to produce enriched uranium and affords USEC the right to shut down and return a plant to DOE under certain conditions. If USEC decides that it is no longer

desirable from a business standpoint to operate both plants, it may return a plant to DOE with two years' notice. During that two-year period, it is USEC's obligation to shut down and deactivate the plant and return it to DOE in an acceptable condition as described in the lease.

USEC may return portions of a plant, but not an entire plant to DOE with a 60-day notice, but the turnover requirements must be met, and DOE must agree to the return.

USEC is a party to several other agreements concerning plant operations, but none of these agreements change the two-year notification period or the turnover requirements.

In May 2000, USEC announced that enrichment operations at PORTS would cease in 2001. In addition, they announced their intention to terminate their lease at PORTS and return those facilities to DOE. USEC provided a Shutdown Plan to DOE in January 2001.

DOE then decided that PORTS should be maintained in a status that would allow a cost-effective resumption of enrichment operations within 18 to 24 months. This decision was made to provide the United States with a strategic hedge in the event of a disruption in the international enriched uranium market. DOE contracted with USEC to maintain this capability under the Cold Standby (CSB) Project. This scope was performed under the Project Baseline Summary, PO-0101, CSB Operations.

Since then, the international market for enriched uranium has remained stable. Consequently, the Under Secretary of Energy approved the decision to terminate CSB effective September 30, 2005. The 2006 Congressional Budget Request reflects the decision.

On October 7, 2005, the Deputy Secretary of Energy authorized a proposal from the Portsmouth/ Paducah Project Office (PPPO) to conduct a formal planning and analysis for a PORTS D&D Project. While the planning effort is underway, USEC will perform risk reduction and material removal activities to facilitate future D&D efforts and provide the necessary maintenance of the facilities. These USEC activities constitute the Cold Shutdown (CSD) Project that is being conducted under an extension of the previous CSB contract.

Although the GDP is now effectively excess to the needs of DOE, USEC is continuing operation of the cascade to remove technetium (Tc-99) contamination from DOE Uranium feedstock. This activity is not included in the scope of the CSD Contract, but rather is being performed under a separate service agreement expected to be completed in 2008. This plan provides the necessary actions for successful facility transfer at that time. The following is a brief summary of actions that DOE and/or DOE contractors should take prior to the transfer of the GDP.

2. DOE SCOPE SUMMARY

Prior to completion of the Technetium Cleanup Program, the following actions need to be performed by DOE or DOE contractors for successful turnover:

- Lease and Deactivation/Shutdown Actions (see Sect. 3 of this plan)
  - — Define expectations for the schedule, conditions of, and related documentation associated with the return of facilities.

- Complete negotiations on lease changes in support of USEC American Centrifuge commercial operation and develop the facilities list for those remaining for return to DOE.

- Initiate a formal due diligence program.

- Establish protocols for facility information to be turned over by USEC for data loading into system data warehouses.

- Based on the facilities to be returned, validate turnover information including the update of Facility Information Management System (FIMS), (compliance with 430.1B Real Property and Asset Management).

- Utilize existing data systems [such as the Geographic Information System (GIS)], to analyze data gaps required for compliant facility characterization necessary to perform D&D. If significant gaps are identified, develop and implement a formal characterization program.

- Monitor USEC activities during deactivation and shutdown.

- Perform a due-diligence validation to ensure that the returned plant meets the turnover requirements.

• Infrastructure, S&M, and Utilities (see Sect. 4 of this plan)

- Negotiate a new, flexible power contract for the period during deactivation and shutdown following completion of ongoing operations.

- Finalize switchyard reconfiguration to support future site missions. Define tasks to incorporate into existing contracts or prepare a Request for Proposal (RFP) for bid and award.

- Finalize determination on steam heat reconfiguration or establish an alternate method of heat for needed facilities. Define tasks to incorporate into existing contracts or prepare a RFP for bid and award.

- Determine S&M reduction projects. Define tasks to incorporate into existing contracts or prepare a RFP for bid and award [Steam, Recirculating Cooling Water, Power, etc.].

- Perform engineering design of water system modifications needed for reduced S&M. Define tasks to incorporate into the existing contract.

- Perform an engineering design of a reconfigured limited area access fencing boundaries, portal locations and electronic access and surveillance equipment. Define tasks to incorporate into the existing contract.

- Perform an engineering design of a reconfigured fire water sprinkler system to implement a "wet-dry" system. Define tasks to incorporate into existing contract.

- Convert the current wet pipe sprinkler system in the X-326, X-330 and X-333 Buildings to a system that is fit for intended use with supplied heat. Define tasks to incorporate into the existing contract.

- Regulatory Actions (see Sect. 5 of this plan)

  — Determine and register the responsible party (preferably USEC) with Reliability *First*, the local electric reliability organization, as the first step in bringing the switchyards into mandatory compliance with the Energy Policy Act of 2005, which became effective on August 8, 2005.

  — Identify all switchyard maintenance and project activities that are required for compliance with the Energy Policy Act of 2005.

  — Negotiate with USEC any switchyard maintenance and project activities that are required for compliance with the Energy Policy Act of 2005 but are not currently covered by the CSB Extension of April 1, 2006 through September 30, 2006.

  — Review existing site permits and define transition process of permits and regulations required for plant oversight.

  — Negotiate environmental permit and regulatory agreement modifications required for DOE's post-turnover operations.

  — Develop appropriate Nuclear Criticality Safety Evaluations and controls for shutdown of cell equipment containing less than the always-safe mass (ASM) of uranium at optimum moderation and full reflection during the S&M period from turnover to D&D.

  — Perform review of all plant classified records to determine which classified records must be stored at PORTS during D&D operations. Ship non-essential records to authorized DOE storage locations offsite.

  — Develop, approve, and prepare to implement a S&M safety basis [including Hazard Analysis (HA), Documented Safety Analysis (DSA), Technical Safety Requirements (TSR), and Safety Evaluation Report (SER)] for the period from facility turnover through the implementation of facility D&D safety basis.

  — Support development, review, and implementation of the D&D facilities safety basis including: HA, DSA, TSR, and SER.

- Workforce Planning (see Sect. 6 of this plan)

  — Prepare a workforce analysis plan to assess the impact and potential utilization of displaced workers. This action will require detailed planning and scheduling of DOE acquisition plans, a transfer of facilities schedule, and an understanding of infrastructure changes and requirements.

- Public Relations (see Sect. 7 of this plan)

  — Conduct communications sessions with workers and community stakeholders throughout the deactivation and shutdown process, initiation of D&D, and post-turnover operations.

- Acquisition and Management (see Sect. 8 of this document)

  — Complete an Acquisition Strategy and Acquisition Plan for a D&D contract,
  — Prepare a DOE Project Execution Plan and Management Plan for a D&D program, and
  — Continue the Critical Decision (CD) Process.

3. LEASE AND DEACTIVATION/SHUTDOWN ACTIONS

3.1 VALIDATION OF DEACTIVATION/SHUTDOWN ACCORDING TO THE LEASE

Deactivation/shutdown is a stipulation of the lease between DOE and USEC in the event of turnover activities. The requirements for those actions should be adhered to per the lease language. DOE should ensure that the expectations for facility turnover are clearly understood by all parties in order to make certain that planning efforts for post turnover activities are of optimum benefit. DOE will need to establish a program to validate that all requirements are met prior to the acceptance of facilities. The following language is taken from a previous turnover study performed under the Bechtel Jacobs Company LLC (BJC) contract. The agreement and applicability of the language needs to be documented.

> *If USEC decides to return one of the GDPs to DOE, Sect. 4.4 (a) of the DOE/USEC lease requires USEC to "provide the Department with documentation of its plans to place such facility into an acceptable condition for return to the Department consistent with the requirements described in subsections (b) through (f) of this Section." Subsections (b) through (I) define the turnover requirements that USEC must meet before the actual turnover of the plant. Because NRC regulates USEC, it is anticipated that NRC must approve the plan for deactivation and shutdown and that NRC will regulate USEC throughout the process of deactivation and shutdown. Although the lease does not specifically give DOE the right to approve the plan, DOE should insist on approval rights because this document defines the actions to be taken to comply with the turnover requirements. Furthermore, NRC will likely follow the precedent set by the "Memorandum of Understanding Between the Nuclear Regulatory Commission and the Department of Energy-Cooperation Regarding the Gaseous Diffusion Plants" related to the approval of compliance plan changes and request DOE approval of this plan before NRC's final approval. NRC regulation during deactivation and shutdown will ensure safety during those evolutions, and DOE review and approval of the plan will ensure that the end point of the turnover process will return to DOE a facility that meets the turnover requirements*

In addition to review and approval of the plan, it is recommended that DOE formulate and implement a validation program that will be conducted onsite during deactivation and shutdown to ensure that turnover requirements are met.

DOE currently has a contract in place with site expertise and knowledge that supply technical support for the CSB/CSD activities. Working groups consisting of DOE, USEC, and DOE support contractors should be formed and tasked with the integration of planning aspects, safety adherence, procedural requirements and field implementations. To guarantee that the DOE mission is accomplished and that corporate and business interest is appropriately managed, the working groups' leads should be DOE personnel.

Each working group should ensure that the final documentation provided is thorough and complete, meets the intent of the DOE mission, meets Data Quality Objectives, (DQO) and fulfills lease requirements for shutdown. These actions need to be clearly defined to all parties, to ensure integration between contracts and adherence to the deactivation plan. It is important that USEC and DOE cooperate in this effort to avoid any misunderstanding of the work necessary to ensure that the turnover requirements are fulfilled.

Currently, TPMC is conducting preliminary facility condition assessments for documentation support of the CD process and S&M planning. However, the detailed plan for validation of

deactivation/shutdown that is described below should be implemented and completed. The due diligence walkdown and facility assessment phase of the validation plan should began no later than 180 days before turnover and should be completed and documented by the turnover date. The working group should require that all parties sign-off on the final documentation, thereby making certain the validation activities are complete and that turnover requirements are met.

3.2 DUE DILIGENCE

Assessments should be conducted on all facilities that are to be returned from USEC to DOE. The assessments will apply a standardized and consistent approach to ensure that facilities returning from USEC fully meet the turnover requirements that are documented in the lease. DOE should not accept facilities until the turnover requirements are met.

The scope of the due diligence project consists of the following activities:

- facility identification,
- facility assessment,
- facility assessment approval and report preparation, and
- facility acceptance.

The focus of facility assessments and due diligence will be the lease turnover requirements and the USEC plan for deactivation and shutdown. Emphasis should be placed on the following areas:

- nuclear safety requirements;
- removal of solid uranium-containing deposits to prevent criticality and documentation of existing uranium hold-up in facilities and equipment;
- removal of all waste generated by USEC;
- receipt of radiological and hazardous materials records, including non-compliances for facilities and structures at the plant;
- receipt of available documentation of facility configuration;
- receipt of available drawings, specifications, procedures, manuals, and applicable unplanned event records and environmental deficiencies;
- ensuring that the returned facilities are in a safe and secure condition; and
- receipt of a status report of the facility's compliance with Environmental Safety and Health (ES&H) regulatory requirements.

3.3 FACILITY IDENTIFICATION

A comprehensive list of facilities that are leased to USEC is contained in Exhibit A of the lease. This list is currently under revision based on the lease changes related to USEC deployment of an American Centrifuge Program. The current situation of changing the lease status indicates that a lease termination is not considered at this time. Research should be performed on previous lease analyses that have been

completed regarding lease termination vs. lease change. This research should be used to derive understanding of the changing conditions.

For example, a previous lease analysis assumed that GDP turnover would be performed under conditions of lease termination. However, this may not be the current situation. This difference could yield differing results in interpretations of turnover requirements. DOE's Environmental Management (EM) should take great care in understanding the nuances, industry reviews, and analysis of documents and letters that may impact the lease turnover of these conditions and the consequence/impacts to the transition and eventual D&D program. In addition, the Shared Site Issues Agreement between USEC and DOE should be updated and revised to reflect current site conditions. The American Centrifuge lease requirements should be finalized and the remaining non-centrifuge facilities identified for return to DOE. The resulting list should contain the facilities for focus during the due diligence implementation. Therefore, it is highly recommended that a lease analysis continue and that vigilance and coordination between DOE programs be seamless.

3.4 FACILITY ASSESSMENTS

A detailed procedure defining the validation program, including checklists to support the due diligence should be developed. This process should be agreed upon and approved for implementation. The resulting checklists should be aligned with functional areas, such as the safety authorization basis, nuclear criticality safety, radiation protection, environmental compliance, and operations. A technical lead should be assigned to each functional area to ensure accountability and consistency of the facility assessment. Based on the final agreement on interpretation of lease requirements, the legal department will provide guidance to the team leads and technical leads in completing the due diligence checklists. The team and technical leads will in turn be responsible for directing the team personnel in the appropriate use of the checklists.

A systematic approach should be developed to conduct the assessments of facilities to be returned to DOE. There are three major efforts needed to complete the assessments of each facility:

- planning
- field surveys
- close-out

The planning phase of the assessment involves identifying and collecting documents and information concerning facility conditions and the status of compliance with turnover requirements. Facility review packages containing facility descriptions, facility history, supporting permits, authorization basis requirements, inventories of radioactive or hazardous materials, turnover requirements applicable to the facility, facility review checklists, and other relevant information should be compiled before walk-downs are conducted.

After gathering the preliminary information required to prepare for facility assessments, the USEC facility manager is to be notified of the planned walkdown. The facility manager will brief the team concerning the health and safety requirements for the facility and provide information pertinent to the checklists. The assessment team will then walk down the facility and complete the applicable checklists. Final packages will be compiled for each facility or groups of facilities and be submitted to DOE for approval. As these packages are approved and DOE agrees that the facility or facilities meet the turnover requirements, DOE will agree to accept the facility or facilities at turnover.

3.5 ASSESSMENT REPORT

A report shall be prepared documenting the due diligence process and documenting the facilities compliance or noncompliance with the turnover requirements.

3.6 ASSESSMENT SCHEDULE

It is important that work on the procedure for due diligence and facility assessment begin shortly after the USEC deactivation and shutdown plan is provided to DOE. The facility assessment should begin no later than 180 days before turnover or at the end of existing programs, and should be completed and documented by the turnover date.

3.7 EARLY FACILITY TRANSFER POTENTIAL

Once a comprehensive list of facilities has been determined for return to DOE, a thorough review should be performed to identify any facilities that could be potentially considered for an early transfer. The identifications should consider impact to ongoing DOE programs, facility categorization, usage, and condition. Focus should be placed on less than Category 2 facilities as prime candidates for early return. Where appropriate, those considered miscellaneous and underutilized should be reviewed for possible excess. If the facilities can be excess, DOE should consider the possibility of entering them into the Inactive Facility Removal program, which is currently underway. Expedient removal of these facilities is consistent with and meets the goals of language defined in DOE O. 430.1B, *Real Property and Asset Management*.

3.8 FIMS UPDATES

Portsmouth compliance with DOE O. 430.1B requires that all facility information be entered into the FIMS. This includes such information as facility descriptions, and usage identification, which defines usages such as fully utilized, under utilized, or excess. FIMS also includes condition assessments, planned and deferred maintenance plans, and deferred maintenance reduction plans. As information is compiled and entered into FIMS, it will be utilized to support the 2007 update to the Ten-Year Site Plan.

3.9 CHARACTERIZATION VALIDATION

Parallel with the due diligence process and in conjunction with the FIMS updates, a comprehensive analysis should be performed to identify and evaluate gaps and shortfalls in facility information. Characterization requirements should be identified based upon the final analysis of the information. Significant gaps should be addressed in compliance with regulatory requirements and with the anticipated Waste Acceptance Criteria for the planned On-Site Disposal Facility (OSDF).

4. INFRASTRUCTURE, S&M, AND UTILITIES

4.1 POWER CONTRACT BACKGROUND

The original power contract with the Ohio Valley Electric Corporation (OVEC) began on Oct. 15, 1952, and was in effect for 25 years. This contract was extended in the late 1970s to Dec. 31, 2005. However, DOE gave OVEC a contract termination notice on Sept. 29, 2000, and DOE power entitlement was reduced to zero on August 31, 2001. The contract was terminated on April 30, 2003, at a cost to DOE of approximately $97.5 million ($97M for OVEC post-retirement benefits plus $10M for OVEC plant closures less $9.5M in tax credits).

There were several contract extensions of approximately 6 or 12 months each from May 2003 through September 2005. This changed significantly in October 2005 when OVEC began requiring monthly power purchases based upon anticipated monthly peak demand; these current OVEC terms do not allow for sell-back of unused power. Since OVEC's power generation is totally committed to OVEC sponsors for the next ten (10) years, OVEC now solicits bids for power on the open-market on DOE's behalf each month. This month-to-month arrangement is undesirable because monthly power costs may fluctuate significantly due to market conditions, seasonal factors, and natural disasters and there is no guarantee of bidders.

4.2 NEGOTIATION OF POWER CONTRACT

Two prerequisites OVEC is insisting upon prior to the implementation of a new, long-term power agreement may present significant roadblocks to the implementation of a new, favorable power contract. The prerequisites should be kept separate from a future long-term power contract. DOE is currently pursuing these issues, which may be briefly summarized as:

- OVEC wants DOE to sign an "interchange agreement" to define switchyard reliability, liability, operation, maintenance, and termination requirements; OVEC has indicated that they will implement this unilaterally if DOE cannot reach an agreement with OVEC. Additionally, DOE would need OVEC's permission to modify or deactivate any switchyard.

- OVEC wants a written, long-term "switchyard maintenance program agreement" that defines and guarantees full compliance with the Energy Policy Act of 2005, as well as, all federal, state and local laws, codes, regulations, and standards such as National Electrical Code, National Electrical Safety Code, American National Standards Institute, and the Institute of Electrical & Electronics Engineers. If DOE falls behind the schedule, OVEC would reserve the right to perform the work and charge DOE for their services. OVEC has also indicated that they would file "reliability-related" complaints with federal and Ohio regulators if DOE does not comply in a timely manner. OVEC recently requested that this agreement be "memorialized" by the first week of April 2006.

DOE is currently negotiating a long-term arranged power agreement with OVEC. This agreement should include the following features:

- An "enabling" agreement to provide flexibility that permits DOE to purchase open-market power through OVEC for variable, monthly power levels over variable time periods, such as 6 months, 1 year, or 2 years.

- No long-term power purchase commitment after the initial period (e.g., 1 year or 2 years). DOE would have the right to purchase zero power upon a written advance notice to OVEC. This would allow for the purchase of power through other power agreements or suppliers should the opportunity arise.

Due to fluctuating and changing requirements at PORTS regarding the power load, DOE should consider flexible power agreements that allow the option to buy additional power and sell back excess power on a day-ahead basis. This would accommodate the anticipated dynamic plant load requirements that will vary due to seasonal factors, increasing power requirements for Uranium Disposition Services LLC (UDS) and the American Centrifuge Plant, and decreasing DOE power requirements during the S&M and D&D phases.

4.3 S&M REDUCTION ACTIVITIES

S&M requirements will not be fully addressed in this plant. Currently, a S&M plan is being developed for PORTS to support a D&D program that will be submitted later. However, in conjunction with that plan, previously submitted recommendations for S&M optimization should be considered. The recommendations should be reviewed to ensure conditions are conducive to implementation.

Once decisions are approved, work control packages and detailed work plans for implementation should be developed. Detailed plans should ensure the integrity of safety controls and work towards an end state that will result in an enhanced status for D&D and verifiable cost savings to be shifted to value added work scope.

One example of potential areas for savings was presented in a white paper entitled, "*Proposed Modifications of the Highly Enriched Uranium Cascade Surveillance and Maintenance Plan.*" This plan identified 158 candidate shutdown cells for reduced S&M requirements and outlined the necessary actions for a potential savings of approximately $1M per year. These cells have been in "standby" mode for over 15 years, since the Highly Enriched Uranium (HEU) Program was suspended.

Other utility evaluations that demonstrated potential efficiencies and cost savings for consideration are:

- OP-05-040, *Proposed Modifications of the X-326 HEU Surveillance and Maintenance Plan (White Paper)*
- TPMC/PORTS-5, *Technical Study of the Recirculating Cooling Water System*
- TPMC/PORTS-6, *Deposit Removal Plan*
- TPMC/PORTS-8, *Electrical Switchyards Assessment* (includes significant power reconfigurations)
- TPMC/PORTS-9, *Technical Study of Steam System* (includes site heating requirements and the potential to shutdown the steam plant)
- TPMC/PORTS-10, *Evaluation of the Dry Air System at PORTS*
- TPMC/PORTS-11, *Raw, Sanitary, and Makeup Water Systems Assessment*
- TPMC/PORTS-33, *Evaluation of the Process Building Dry Sprinkler Systems at PORTS*

- TPMC/PORTS-35, *Evaluation of the Nitrogen System at PORTS*
- TPMC/PORTS-43, *Re-utilization and Excessing of Property of the Portsmouth Gaseous Diffusion Plant*
- TPMC/PORTS-44, *Order of Magnitude Cost Estimate for Removing Excess Equipment from the X-326, X-330, and X-333 Process Buildings*
- TPMC/PORTS-52, *Cost Estimate for Removing Excess Equipment and Materials from the Support Buildings and Grounds*

It should be significantly noted that the TPMC/PORTS-8, *Electrical Switchyards Assessment*, recommendation of promptly deactivating the X-533 Switchyard to realize immediate cost reductions also eliminates approximately half of DOE's future switchyard costs and liability for compliance with the Energy Policy Act of 2005.

Under the existing contract circumstances, efficient implementation of field activities is complicated with lease, shared site, and Nuclear Regulatory Commission (NRC) oversight issues. However, this should not deter prudent use of government funds. All possibilities should be examined and, if possible, an effort should be made to assess the likelihood of overcoming these obstacles.

5. NEGOTIATION OF ENVIRONMENTAL PERMIT AND REGULATORY AGREEMENT MODIFICATIONS

This section is to identify existing permits, administrative orders, and regulatory agreements that are impacted as PORTS enters deactivation and shutdown. Also identified are known regulatory sensitivities that DOE will need to consider as activities continue and scheduled turnover is more clearly defined. As the regulatory framework for the D&D program at PORTS is defined additional issues and sensitivities are expected. A firm understanding of the existing agreements, orders, and permits is indispensable in developing a comprehensive strategy that will prove acceptable and beneficial to the program needs. The following summary is provided in Table 1 of this plan for reference of these permits, administrative orders, and regulatory agreements with pertinent and applicable information.

5.1 REGULATORY SENSITIVITIES

5.1.1 Federal Energy Regulatory Commission (FERC) Directives

The Energy Policy Act of 2005 became effective on August 8, 2005, and mandates reliability requirements for the North American power grid. The FERC has directed the regional electricity reliability organizations (ERO) or councils (Reliability *First* for the Ohio area) to establish and enforce mandatory reliability requirements for users, owners, and operators of the nation's bulk power system. The implementation of these mandatory requirements has not been defined and implemented at PORTS. This is covered in detail in Sect. 4 of this plan.

Table 1. Summary of permits, administrative orders, and regulatory agreements

Permit/Order/Agreement Title	Scope	Issuer/Regulatory Oversight	Signatory	Expiration Date
Ohio Environmental Protection Agency (Ohio EPA) Consent Decree	Directs DOE to conduct site remedial investigation and conduct remediation where necessary	The State of Ohio (Ohio EPA has oversight)	DOE	
United States Environmental Protection Agency (U.S. EPA) Administrative Consent Order	Directs DOE to conduct site remedial investigation and conduct remediation where necessary	U.S. EPA (Day-to-Day oversight responsibility delegated to Ohio EPA)	DOE	
USEC National Pollutant Discharge Elimination System Permit 0IS00023	Permission and conditions for discharge to and monitoring of liquid effluents streams	Ohio EPA	USEC	7/31/2008
USEC Title V Permit under the Clean Air Act - 06-66-00-0000	Permission and conditions for operation of air emissions sources (65)	Ohio EPA	USEC	8/21/2008
Underground Storage Tank (UST) Registration	Registration of USTs with the State Fire Marshall's Office	State Fire Marshall's Office	DOE	
Superfund Amendments Reauthorization Act (SARA) 312	Annual Hazardous Chemical Inventory	U.S. EPA	DOE	
SARA 313	Annual Toxic Chemical Release Report	U.S. EPA	DOE	
Resource Conservation and Recovery Act (RCRA) Directors Final Findings and Orders (DFF&Os)	This order allows USEC to store hazardous waste longer than 90 days by utilizing the DOE Part B storage areas.	Ohio EPA	USEC	
Toxic Substances Control Act Federal Facilities Compliance Agreement (FFCA)	This FFCA covers the requirements for managing Polychlorinated Biphenyl (PCB) material and wastes at PORTS.	U.S. EPA	DOE	

Table 1. Summary of permits, administrative orders, and regulatory agreements (continued)

Permit/Order/Agreement Title	Scope	Issuer/Regulatory Oversight	Signatory	Expiration Date
National Emission Standards for Hazardous Air Pollutants	Annual Report of Radioactive and Hazardous Air Emissions	U.S. EPA	DOE	
Site Treatment Plan DFF&Os	This is an agreement on how USEC will handle troublesome wastes for which they are not able to meet regulatory requirements due to radioactive content.	Ohio EPA	USEC	
Spill Prevention Control and Countermeasures (SPCC)	SPCC Plan	U.S. EPA	USEC	

5.1.2 FFCA

In addition, the current FFCA between U.S. EPA and DOE, in Attachment I Section 2, defines several areas for completion regarding PCB equipment and contaminated articles, as of 2015 or within 10 years of work initiation. Mutual agreement needs to be reached on the definition of work initiation between all involved parties to ensure scheduled completion of these PCB-related requirements is not negatively effected.

5.2 CONSENT DECREE/ADMINISTRATIVE ORDER BY CONSENT

Under the current regulatory agreements defined in the State of Ohio issued Consent Decree and the U.S. Environmental Protection Agency (EPA) issued Administrative Order by Consent, there are 45 Solid Waste Management Units (SWMUs) that were identified during Decision Team meetings as needing remediation "deferred" until D&D of the plant. These units were deferred based on: (1) low health risk, (2) the contamination was not mobile, and (3) the potential to interrupt diffusion plant operational and/or the likelihood of recontamination was likely.

As a result of the cessation of the CSB Program at the end of 2005 and the beginning of CSD, the State has identified a concern with the schedule of planned actions for these units. This concern was voiced in a letter from the Ohio EPA to the DOE PPPO dated November 1, 2005, regarding DOE obligations during D&D of PORTS facilities.

5.2.1 Deferred Unit History

In 1980, DOE submitted a notification of hazardous waste activity at PORTS. In August 1989, DOE entered into a Consent Decree with the State of Ohio, and in September of 1989, DOE and the U.S. EPA entered into an Administrative Order by Consent. PORTS has been divided into quadrants for segregation and phasing of site remediation work. Each quadrant roughly corresponds to distinct groundwater flow cells within the primary water-bearing unit beneath the site. Because the flow cells are major pathways for contaminant migration, each has been investigated separately. Contaminants of concern include: radioactive Tc^{99}, PCBs, trichloroethene, and RCRA heavy metals.

During the initial RCRA assessment conducted at PORTS, 161 SWMUs were evaluated and these findings were published in the PORTS quadrant-based Description of Current Conditions Reports. These documents identified 58 units as requiring no further action. The remaining 103 units were investigated further in the quadrant based RCRA Facility Investigation (RFI). The RFI determined that 28 units required no further action and 75 units required a Corrective Measures Study (CMS) to identify alternatives to remediate these sites. During the CMS, DOE and Ohio EPA agreed that 12 of the 75 original units should be re-grouped and identified with a specific CMS unit. For instance, remediation of the storm sewer system, the re-circulating cooling water system and the sanitary sewer system units, as previously identified within each quadrant (12 in total) were to be addressed as part of the units they served. During the fourth quarter of 1997 and the first quarter of 1998, DOE, U.S. EPA, and Ohio EPA held a series of Decision Team meetings to discuss strategy for remediation of PORTS. During these meetings, the Decision Team agreed that 44 units should be deferred to D&D if: (1) health risks were low; (2) contamination responsible for the health risk was not mobile; and (3) if the location of the units is in or adjacent to current production and operational areas, remediation might interrupt operations and/or cause the unit to become recontaminated. Since the Corrective Action program began at PORTS, 18 units have been remediated with one remaining non-deferred unit (X-701B) requiring further remedial action. The 45^{th} unit was added in March 2005 as agreed upon between EPA and DOE. This unit is the remaining X-701C Process Line, which was left in place following the removal of the X-701C Neutralization Pit.

In 2003 and 2004, BJC (under contract to DOE) performed a deferred unit evaluation. The results identified that five of the deferred units no longer met the deferral criteria and potentially could be accessed. These units include the X-770 Mechanical Testing Facility, X-744N, P, and Q Warehouses, X-342C Waste HF Neutralization Pit, X-344C HF Storage Facility, and the X-747H Northwest Surplus and Scrap Yard. After further evaluation of the original five units identified, three of the units have been determined potential for early assessment. For better understanding on these determinations, please reference updated Deferred Unit Plan for October 1, 2004 through September 30, 2005.

Agreed upon deferred units are shown in Table 2 of this plan.

Table 2. Deferred units

Quadrant I
Big Run Creek
X-600 Coal Fired Steam Plant
X-600A Coal Pile Yard
X-621 Coal Pile Runoff Treatment Facility
X-626-1 Recirculation Cooling Water Pump House and X-626-2 Cooling Tower
X-230K South Holding Pond
X-770 Mechanical Testing Facility
X-2230M Southwest Holding Pond
Quadrant II
X-633 Recirculating Water Pump House and Cooling Towers
X-700 Chemical Cleaning Facility (Soils only)
X-705 Decontamination Building (Soils only)
X-705A Radioactive Waste Incinerator/X-705B Contaminated Burnables Storage Lot (Soils only)
X-720 Maintenance Building (Soils only)
Soils in the Vicinity of the X-720 Neutralization Pit
7-Unit Groundwater Area
X-230J7 East Holding Pond and Oil Separation Basin
East Drainage Ditch
Little Beaver Creek
Remaining X-701C Process Line
Quadrant III
X-230J3 West Environmental Sampling Building and Intermittent Containment Basin
X-230J5 West Holding Pond and Oil Separation Basin
X-326 Process Building
X-330 Process Building
X-530A Switchyard, X-530B Switch House, X-530C Test and Repair Building, X-530D Oil House, X-530E Valve House, X-530F Valve House, X-530G Gas Centrifuge Enrichment Plant (GCEP) Oil Pumping Station
X-744N, P, and Q Warehouses associated with Old Construction Headquarters
X-745C West Cylinder Storage Yard
X-2230N West Holding Pond
X-7725 Recycle and Assembly Building
West Drainage Ditch
Quadrant IV
X-230J6 Northeast Holding Pond, Monitoring Facility, and Secondary Oil Collection Basin
X-333 Process Building

Table 2. Deferred units (continued)

Quadrant IV (continued)
X-342A Feed Vaporization and Fluorine Generation Building
X-342B Fluorine Storage Building
X-342C Waste HF (Hydrogen Fluoride) Neutralization Pit
X-344C HF Storage Facility
X-533A Switchyard, X-533B Switch House, X-533C Test and Repair Building, X-533D Oil House and Associated French Drains, X-533E Valve House, X-533F Valve House, X-533H Gas Reclaiming Cart Garage
X-630-1 Recirculating Water Pump House, X-630-2 A and B Cooling Towers
X-630-3 Acid Handling Station
X-745B Enrichment Process Gas Yard
X-747H Northwest Surplus and Scrap Yard
Chemical and Petroleum Containment Basins (east of X-533A) and Emergency Containment Tanks
X-230L North Holding Pond, and Un-named Construction Fill Area
Northeast Drainage Ditch
North Drainage Ditch
Transformer Cleaning/Storage Pad

5.2.2 Deferred Unit Recommendations

In keeping with DOE's working relationship with the Ohio EPA, DOE should consider expediting field sampling and verification on the deferred units that are available. As part of future facility characterization required for D&D activities, innovative methods should be explored for further assessment on other deferred units, if possible. Also, as facilities are identified for early transfer from USEC back to DOE, which are linked to a deferred unit, DOE should be prepared to perform characterization on the unit.

These actions will enhance DOE's position with the state and demonstrate a good faith effort toward practical activities which are beneficial to all programs and site missions. For example, the PORTS GIS database can be updated with additional environmental data required in support of final soils and groundwater remediation, sighting for a potential OSDF, engineering evaluation, environmental impact assessments or the substantial equivalent, and the D&D program.

5.3 AUTHORIZATION BASIS REVISIONS

DOE is currently in the process of procuring a contract to develop safety basis documentation for S&M of PORTS facilities prior to D&D. This is expected to be awarded in May of 2006.

5.3.1 Safety Basis History

There are currently three separate sets of safety basis documents implemented at PORTS; a Safety Analysis Report (SAR), TSR, and SER for LATA/Parallax Portsmouth LLC (LPP) and TPMC; a DSA, TSR, and SER for UDS, and the USEC SAR and TSR. The USEC SAR and TSR for the leased portion of PORTS are contained within the NRC certification documentation for the GDP. USEC is responsible for and maintains these documents and all changes are implemented promptly through a rigorous plant change process.

UDS assumed responsibility for the X-745C, X-745E, and X-745G-1 Cylinder Yards DSA, TSR, and SER when the cylinder yards were transferred to UDS in June 2005. UDS is responsible for

maintaining, updating, and implementing changes to the X-745C, X-745E, and X-745G-1 Cylinder Yards safety basis.

Responsibility for non-leased portions of PORTS was assumed by LPP and TPMC in June 2005. The non-leased facilities are covered by an approved safety basis which includes the 1997 BJC SAR, 1997 DOE SER, 1999 BJC TSR and approved Unreviewed Safety Question Determination (USQD) since 1995. Existing Preliminary Hazard Screenings (PHS) were adopted by both LPP and TPMC as applicable to their respective facilities during contract transition from BJC. These PHSs have been maintained and updated as required by LPP or TPMC as appropriate. Additionally BJC developed a DSA and TSR for the category 2 non-leased, non-cylinder yard facilities at PORTS and obtained a DOE approved SER during September 2004. Implementation of the new Category 2 safety basis was placed on hold in early 2005 to incorporate necessary changes to the safety basis. Responsibility for completing changes to, and implementation of, the safety basis for non-leased Category 2 facilities and responsibility for maintaining and updating the existing safety basis was transferred to LPP in June 2005. LPP subsequently completed the necessary revisions and updates to the Category 2 facility safety basis documents. Implementation of LPP's new Category 2 facility safety basis is anticipated to be completed in fiscal year 2006. Replacement of the current LPP and TPMC safety basis (1997 SAR and SER, 1999 TSR and USQDs since 1995) will be complete upon LPP implementation of the new Category 2 facility safety basis.

Neither the current USEC SAR nor the UDS or LPP DSAs and TSRs will provide an adequate safety basis for the shutdown plant when the leased facilities are returned to DOE. Adequate authorization basis documentation for the returned plant must be developed before turnover. Two sets of safety basis documentation are likely to be required prior to the turnover of the leased facilities to DOE; a S&M DSA, TSR and SER; and a D&D DSA, TSR and SER. This will be a major task, and it is recommended that any existing documents from the Oak Ridge complex be utilized in understanding the magnitude of this work.

6. PREPARATION OF WORKFORCE ANALYSIS PLAN

PORTS is currently operated and maintained by trained and experienced workers. These workers perform operations and maintenance tasks that are similar to process equipment preparation and removal tasks during early phases of D&D. The workers are also trained in ES&H issues that are important to the D&D effort. Workers that are available as a result of declining needs can, with a minimum of D&D specific training, move directly to the equipment removal phase of D&D work. The ability to perform this work could allow early D&D to be initiated prior to the completion of facility turnover.

Early in the planning process (once CD-1 is approved, see Sect. 8 of this plan for definition of CD-1), a workforce analysis plan should be prepared. One example that could be utilized for consideration was prepared and implemented for the Oak Ridge Management and Integration (M&I) contract for the corporate transition under BJC. The workforce analysis plan should be based on training and placing displaced workers into ongoing and upcoming activities. The plan should recognize that this work may be subcontracted or self-performed by the contractor. The plan should also recognize that displaced workers may transition to the contractor or associated subcontractors throughout the transition period or at turnover. It is unlikely that DOE work will be available for all displaced workers, necessitating some voluntary reductions in force and involuntary reductions in force.

We assume that workforce transition will be accomplished in a manner similar to the corporate transition under the previous BJC M&I contract, with a new contract definition of "grandfathered" employees that is tailored to the GDP turnover circumstances. It is also anticipated that transitioning

employees would be entitled to "substantially equivalent pay and benefits" as stated in the current contract and consistent with applicable labor agreements. These assumptions should be maintained unless DOE directs otherwise. However, they should be gauged against current DOE policy considerations for appropriate applicability to workforce transition planning.

Close coordination between GDP shutdown and turnover and initiation of D&D work will minimize workforce disruption, reduce worker severance costs, and result in expedited D&D completion. These elements contribute to the lowest overall lifecycle baseline cost to DOE. This course of action is strongly recommended to DOE.

7. COMMUNICATIONS AND PUBLIC RELATIONS WITH EMPLOYEES AND OTHER STAKEHOLDERS

There will be a great deal of interest from USEC, DOE, and DOE contractor employees at PORTS in regard to the future activities and missions once officially shutdown. Community leaders and state and federal officials will be requesting as much information as possible to seek assistance for the workers who are affected and for their region. Local socio-economic impacts will become the subject of speculations; therefore, a timely and decisive plan will assist in calming negative press and undue concern.

The decision to formally shut down the plant and enter into D&D will result in regional and national media attention. Extensive up-front planning will be required to ensure a comprehensive, timely, open, and accurate communications policy is developed to address the many different entities needing information.

As soon as DOE reaches the determination and approval of CD-1 for D&D of PORTS, DOE should begin an intensive communications program for employees and other stakeholders. Communications should include the fact that DOE has and is planning for the GDP turnover, and rather than shutting PORTS down and walking away, DOE is committed to entering the D&D phase, possibly even before turnover is official. The concept of transitioning displaced USEC employees directly to other programs, such as continued infrastructure requirements and to the D&D project, will be essential to calm local concerns, mitigate labor reductions, and lessen economic impacts. A communications planning strategy would include, at a minimum, the following:

- initial informational briefings and fact sheets for employees and union leadership,
- teleconference with state/federal officials,
- press briefing for media,
- toll-free hotline for employees to call with questions,
- stakeholder meetings in local areas surrounding the plant,
- meetings for employees and their families to discuss options/benefits,
- regular communications bulletins (both electronic and hardcopy formats) to keep employees informed of developments, and

- news, area media, and stakeholders updates.

In-plant employee meetings, stakeholder meetings held outside the plant, public meetings, and written informational bulletins should be used to communicate information on plant shutdown and the transition of employees.

Due to the sensitive and sometimes emotional nature of these issues, it is highly recommended that these actions be well planned and fully developed prior to entering into formal communication. The development of a comprehensive public relations plan and schedule of communications events is warranted.

8. ACQUISITION AND MANAGEMENT PLANS

As specified by DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets*, DOE should pursue prompt development and approval of both an Acquisition Strategy and an Acquisition Plan. These documents will be needed to support D&D of PORTS and will facilitate planning for retention of a D&D contractor. Likewise, an RFP for the D&D Contract should be developed, as soon as practical, consistent with DOE Order 413.3 and other applicable DOE requirements.

Note that if long-term S&M should be chosen as an alternative to prompt D&D of PORTS, similar acquisition activities will be required, possibly including the development of an RFP for retention of a S&M contractor.

The program and project management requirements for the acquisition of capital assets are provided in DOE Order 413.3 and the associated Manual and Guidance documents. The Order identifies five phases required for each acquisition. Those five phases, or CD points, include the following:

- CD-0, Approve Mission Need
- CD-1, Approve Preliminary Baseline Range
- CD-2, Approve Performance Baseline
- CD-3, Approve Start of Construction
- CD-4, Project Closeout

The Mission Need Statement was approved by EM-1 on September 30, 2005; the CD-0 was approved by Deputy Secretary of Energy on October 7, 2005. The next step in the process is to develop the conceptual design. This conceptual design results in a conceptual design report, an acquisition plan, preliminary project execution plan, and a preliminary baseline range. The preliminary baseline range at the design stage consists of a cost, schedule, and scope for the design phase, and a range for the cost, schedule, and scope for the remainder of the project. Approval of CD-1, preliminary baseline range, is currently anticipated to be received during October 2006.

Once CD-1 approval is obtained, the following activities will be completed in preparation for CD-2:

- completion of preliminary design,
- final project execution plan,
- completion of performance baseline,
- completion of an independent cost estimate, and
- completion of a draft preliminary SAR.

CD-2 approval is expected in April 2008. Following approval of CD-2, a contract will be awarded for D&D and disposal cell construction. Final project plans will be developed prior to the approval of CD-3, approval to start construction. CD-3 is currently anticipated to be approved in July 2009.

9. USEC ACTIVITIES

This section of the plan is to identify significant requirements for the return of a GDP as defined in the lease and considered the responsibility of USEC.

USEC activities include:

- Revision of the existing USEC Enrichment Operation, Shutdown, and Deactivation Plan;
- Continued deposit removal to bring known deposits to ASM;
- Document technical approach and provide the technical bases for definition of criticality safety;
- Complete current programs and define product withdrawal programs with scheduled power rampdown;
- Auxiliary system treatment and documentation;
- Shutdown and deactivation;
- Waste documentation and disposition; and
- Supply final turnover documentation including a listing of all records transferred as part of the turnover process.

9.1 TERMINATION OF FACILITY OPERATIONS

The Enrichment Operation, Shutdown, and Deactivation Plan that was provided by USEC in January 2001, was developed prior to the decision to place the PORTS facilities in CSB. USEC should update the plan to reflect current conditions. This plan should then be reviewed and approved by DOE.

9.2 DEPOSIT IDENTIFICATION AND REMOVAL

In order to reduce both risk and S&M costs, the CSD activities should ensure that known uranium deposits above the ASM in the process equipment (converters, compressors, coolers and auxiliary equipment) be remediated below the ASM limit. The remediation is accomplished using either gas treatments (running cell, static gas charge, or low temperature long term) or mechanical removal/clean-out techniques. The specific remediation will be selected for each deposit depending on the size, location, and composition of the deposit, as well as, the available resources to accomplish the task safely.

As part of the CSB Program, a non-destructive assay (NDA) program was utilized to identify and support a deposit removal program. Continued monitoring of this program as part of the CSD scope is part of the DOE Support Contract with TPMC Infrastructure Services. TPMC supplied DOE with detailed analysis of this program in September 2005.

9.3 COMPLETION OF PRODUCTION MISSION AND RAMPDOWN OF POWER

It is likely that some product withdrawal requirements will remain at the completion of the Tc^{99} program. A product withdrawal timeline should be established and completed. Upon completion of the product withdrawal requirements, the plant would be ready for power reduction and shutdown. After completion of the current mission, uranium hexafluoride feeds should be shut off, and the in-process inventory removed via the product withdrawal facilities. Process auxiliary facilities, including the Evacuation Booster Stations should be used to reduce in-process inventories to a minimum. Operating cells will be given a "hot gas" treatment prior to shutdown in order to remove Tc-99 adsorbed onto equipment surfaces.

9.4 CELL AUXILIARY SYSTEM CHEMICAL TREATMENT

Once in-process inventories have been reduced to a minimum, the remaining inventory should be purged from the system, and based on NDA results, the cells and auxiliary systems not requiring treatment should be shut down. Cells and auxiliary systems requiring treatment can then be treated with the reaction products processed through the purge cascades or in the cold traps. Once treatments are completed and follow-up NDA measurements are conducted, the treated equipment can be shut down. If the NDA measurements confirm deposit removal below ASM, no further action is required. If the NDA measurements confirm the continued presence of deposits, then the deposits must be manually removed, and the process equipment integrity must be restored.

9.5 SHUTDOWN AND DEACTIVATION

Deactivation should begin as soon as the equipment is shut down. Deactivation is also defined in DOE Order 430.1B, "*Real Property Asset Management.*" The definition is as follows: "The process of placing a facility in a safe and stable condition including the removal of readily removable hazardous and radioactive materials to ensure adequate protection of the worker, public health and safety, and the environment, thereby limiting the long-term cost of S&M. Actions include the removal of fuel, draining and/or de-energizing nonessential systems, removal of stored radioactive and hazardous materials, and related actions. Deactivation does not include all decontamination necessary for the dismantlement and demolition phase of decommissioning, e.g., removal of contamination remaining in the fixed structures and equipment after deactivation." Evaluation of the requirements and guidelines from this Order will need to be integrated into DOE's plan for transition to D&D.

While it is not the intent of this plan to discuss details of the lease language it is necessary to understand the lease as a whole. The following concern has been discussed in previous documents and/or plans and regards to the lease turnover requirement is still unresolved, therefore one of concern.

As stated in the "Pre-Deactivation and Decommissioning Plan at the Portsmouth GDP" dated April 30, 2005:

"The portion of (b) "Remove solid deposits of UO2F2/UF4 to the extent necessary to prevent criticality, using an in-place removal process....." has been subject to interpretation between USEC and DOE as to the definition of "prevent criticality" for several years. USEC's criteria for preventing a criticality is "the deposits be equal to or less than 43.5% of a minimum critical mass assuming an H/U of 4, optimum geometry (unless the deposit geometry is known and specifically analyzed) and full reflection." (Note: this definition is consistent with the USEC TSR associated with it's NRC certificate.) In March of 2002, DOE disagreed with USEC's criteria and stated their criteria as "43.5% of the minimum fissionable mass for the assay of concern in a fully moderated and fully reflected system."

It is recommended that the lease be fully evaluated and documented (including as assessment of the impact of letters and other agreements between USEC and DOE) and mutually understood by USEC and DOE.

9.6 REUSE OF MATERIALS AT THE OPERATING PLANT

During the course of deactivation and shutdown, USEC may choose to transfer certain materials from the shutdown plant to the operating plant to reduce operating costs. Key equipment that may be used at the Paducah Gaseous Diffusion Plant (PGDP) can be moved to that site. Final disposition of this material will be deferred until D&D of PGDP. Excess DOE materials will be considered for recycling when there is a disposition pathway for utilizing the material for its original intended purpose.

9.7 WASTE REMOVAL

This definition of "deactivation" includes waste removal and other work specifically stated in the turnover requirements. Recirculating water systems and lube oil systems should be drained, electrical systems should be de-energized, and other systems identified in the deactivation and shutdown plan should be drained or de-energized. Re-use of some these materials, if possible, should be documented by USEC. Otherwise materials will be defined as waste. At that time USEC should provide DOE with a listing of the proposed waste streams defined as USEC generated wastes for removal and disposition. This inventory should include waste characterization data and a planned disposition path.

9.8 DOCUMENTATION

USEC must provide DOE with documentation of the final deactivation/shutdown of the facility and documentation that no future use of the facility is planned. USEC and DOE should work together to outline defined actions that will be performed and agreements reached. Monitoring of these activities is described in Sect. 3 of this plan. Part of that process will be to ensure that the final documentation is complete. In the event of future concerns, this documentation will serve as proof that the deactivation and shutdown plan was implemented as written and that the turnover requirements were met. Should DOE determine to accept certain requirements as less than fulfilled per the lease, all findings and agreements shall be documented during this process.

USEC should provide all facilities maintenance documentation, hazardous materials inventory, spill and release documentation, and all other pertinent information that DOE deems essential to the safe transfer for continued S&M and eventual D&D of the returned facilities.

10. ASSUMPTIONS

Many areas in the preparation of this scoping document are based on specific assumptions. However, all are subject to the over-riding programmatic assumptions that are the premise for this plan. (1) DOE will fulfill the obligation for cleanup of contaminated sites resulting from historical uranium enrichment programs. (2) PORTS will enter into a prompt D&D program. (3) S&M will be performed in support of transition to a D&D program and is not intended to be a long-term operation. Other assumptions include but are not limited to:

- DOE and USEC will reach clear agreements on lease arrangements for the USEC Commercial Advanced Centrifuge program in calendar year 2006.
- DOE and USEC will reach clear and concise agreements on lease shutdown turnover requirements in the planning period.
- USEC will continue to be regulated by the NRC and the Occupational Safety and Health Administration until the turnover date; on that date, DOE will become responsible for the entire site under either DOE regulation or outside regulation.
- During the deactivation/shutdown period preceding facility transfers, DOE will not impose or self-perform any work intended to exceed or redefine the turnover requirements as described in Sect. 4.4 of the lease. However, it will be necessary for DOE to perform certain tasks during the performance period to prepare the plant for post-turnover operations. This work includes, but is not limited to, providing heat to facilities now heated with steam or waste process heat. Because such work may be in leased space or on leased systems, agreement among DOE, USEC, and NRC will be necessary.
- Plant systems needed for heat to support ongoing DOE operations and facilities will be reconfigured as necessary. This work must be accomplished before the first winter following the final transfer.
- DOE will complete the required notifications and power negotiations with OVEC prior to completion of transfer.
- The returned plant will be taken into the EM D&D program at turnover to reduce long-term S&M costs, to maximize the use of trained and qualified workers, and to minimize severance costs. Some D&D tasks may begin before turnover.
- Union collective bargain agreements on workforce transition will be resolved prior to the transfer of PORTS and not impact D&D operations.
- D&D will be accomplished through a full and competitive RFP.
- Reindustrialization program will be considered with involvement through the Southern Ohio Diversification Initiative.

APPENDIX

ATTACHMENT A WORK PACKAGE OUTLINE

ATTACHMENT A WORK PACKAGE OUTLINE

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